

## **ABSTRACT**

A dynamic photolithography system resizes a pattern in real time and photolithographically transfers an image of the resized pattern onto a surface to compensate for distortions in the surface and/or optics. The system uses two or more pre-stored spatially offset renderings of the pattern. Each spatially offset rendering includes pixel data identifying light modulation elements within a spatial light modulator representing the pattern. The pattern is spatially offset between the renderings. Portions of the two or more spatially offset renderings are selected as a function of the distortion to resize the pattern and photolithographically transfer the image of the resized pattern onto the surface.

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